REMARKS

A. INTRODUCTION

The March 20, 2007 Office Action has been received and carefully considered. Claims 1-25 are pending in the application. In this response, no amendment has been made to the claims or other parts of the application. Applicant still believes that the application is in condition for allowance and notice thereof is respectfully requested.

B. THE REJECTION UNDER 35 U.S.C. § 103

On page 2 of the Office Action, claims 1-2, 11-13 and 25 are rejected under 35 U.S.C. §103(a) as being unpatentable over Sit *et al.* (US Patent 6,349,336, hereinafter "Sit") in view of Fangman *et al.* (US Patent 6,687,245, hereinafter "Fangman"). On page 4 of the Office Action, claims 3-4 and 14-15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Sit, in view of Fangman, and further in view of Fan *et al.* (US Patent 6,219,706, hereinafter "Fan"). On page 6 of the Office Action, claims 5-10 and 16-24 are rejected under 35 U.S.C. §103(a) as being unpatentable over Sit in view of Fangman and Fan, and further in view of Albert *et al.* (US Patent 6,687,222, hereinafter "Albert"). These rejections are respectfully traversed.

Despite Applicant's criticism in the December 28, 2006 Appeal Brief (at p. 17-20), the Examiner appears to have again taken a flawed approach in the "new" grounds of rejection. Compared to the previous rejections based on Sit and Underwood (U.S. Patent 6,718,535), the current rejections replace Underwood with Fangman. However, the current rejections are just as deficient, if not more so, for at least the following reasons: (1) none of the cited references, including Fangman, teaches or suggests restricting FTP data to a single port on a firewall; and

(2) there is no suggestion or motivation to combine FTP functions with the "single port" feature, let alone a further combination of single-port FTP with Sit.

As the Examiner acknowledged on page 3 of the Office Action, Sit does not mention using a single port on the firewall and does not support FTP. The Examiner asserts that Fangman discloses single-port communication through a firewall and FTP in the following passages:

> "Firewalls tend to support single port communication only initiated from the inside. Additionally, triangulated communications between IP telephones present a particular problem, referred to as the "triangle problem", described below." Fangman: col. 2, lines 22-26.
>
> "This [*i.e., using Application Level Gateway as a proxy*] has been done for a variety of protocols such as ICMP and FTP, and lately H.323 and SIP (two earlier VoIP standards), and solves the basic problem of public IP to private IP communication." Fangman: col. 2, lines 34-37.

If Fangman is cited solely for the keywords "single port communication" and "FTP," the Examiner is absolutely right. However, if the Examiner meant to cite Fangman for the disclosure of single-port FTP through a firewall or somehow expects the combination of Fangman with Sit to do the magic of teaching or suggesting single-port FTP, it would not work.

The phrase "single port communication" in the above-quoted passage has no relevance to FTP protocol at all. If one reads the entire paragraph at col. 2, lines 12-26, it is not difficult to understand that Fangman is comparing "single port communication only initiated from the inside" with VoIP protocols which "use pairs of ports for communication, initiated from both the inside and outside of the network" (emphasis added). It is quite clear that the "single port communication" does not include FTP at all because traditional FTP requires a pair of ports, just like the VoIP protocols as Fangman has correctly characterized. Therefore, in terms of the firewall issues discussed in Fangman, FTP is more like VoIP protocols than any "single port

communication" protocols such as HTTP. Therefore, the phrase "single port communication," when put into its context in Fangman, does not suggest the restriction of data transfers to a single port on a firewall. Rather, it refers to those communication protocols that only requires one firewall port. FTP protocol is not one of those single-port protocols.

The next passage (col. 2, lines 34-37), which the Examiner cites as disclosing "FTP," discusses interoperability between upper-layer protocols and Network Address Translation (NAT), which has no relevance to single port communication through a firewall at all.

The only other instance where Fangman mentions "single port" is in the paragraph at col. 17, lines 6-23, where Fangman teaches assigning "a range of ports to the IP telephone 120 rather than a single port" (emphasis added). Note that Fangman is teaching the use of multiple ports on the firewall. Interestingly, the word "FTP" is also mentioned in the last sentence of the same paragraph —

> "In one embodiment, the range of port numbers assigned to the IP telephone 120 may include ports which are not reserved for use by other IP protocols, such as FTP, HTTP, etc., by the Internet Engineering Task Force (IETF)."

Even more notably, the Examiner has cited to this same sentence on page 4 of the Office Action, apparently as part the argument that an ordinary skilled person would be motivated to combine Fangman with Sit. If the Examiner recalls, in earlier responses, Applicant has cited the same port number assignments made by IETF, wherein port numbers 20 and 21 are reserved for FTP communications. Now that the Examiner is also referring to the IETF port number assignments, the authoritativeness of which is undisputed, it is worthwhile to take a minute to reflect on this question — *Is FTP traditionally a single-port or two-port protocol*?

It is well known standard that each FTP session involves two TCP ports, one for command and one for data. In the Background of the Invention, Applicant has pointed out that,

because of the multiple-connection requirement, a traditional FTP session through a firewall often requires the opening and closing of multiple random ports in the firewall to accommodate the data connections. That is, a firewall port randomly assigned for one FTP data connection does not remain open indefinitely. *See* present application: Figure 1 and paragraph [0016] ("After requested data are sent to the passive FTP client system 2 by the FTP server 4 over the data channel, the FTP server 4 and the firewall 10 dynamically close the corresponding logical communication ports until the next data channel transmission.").

That was the state of the art at the time of the present invention, and the Examiner has not made any attempt to contradict that.

If the two-port FTP model was and still is the prevailing standard (as evidenced by IETF port number assignments), the Examiner has to face a simple yet critical question — *Why would anyone skilled in the art ignore the standard, by restricting the data and command connections in an FTP session through a single port on a firewall?* In view of the existing FTP standard, and without the hindsight from the present application, the concept of "single port communication" is simply incompatible and uncombinable with the standard FTP operations.

The Examiner has been attempting to glue together the following pieces found in the cited references: (A) the physical structure disclosed in Sit, (B) "single port," and (C) "FTP." Applicant has acknowledged the physical similarity between the claimed system and the Sit system. However, with respect, Applicant does not believe the Examiner can ever find the "glue" needed to put (B) and (C) together. It is almost irrelevant as to where the Examiner finds the keywords "single port" and "FTP." The real issue is whether there has ever been any teaching, suggestion or motivation to combine these two elements, other than those found in the present application. So far, the Examiner has found the keywords "single port" and "FTP" in

Epstein, Underwood, and Fangman. But, the obviousness grounds of rejection have been virtually unchanged. Instead of continuing the fruitless keyword searches, the examination of the pending claims should focus on the motivation to combine "single port" with "FTP."

As stated earlier, the recognition of the problem (i.e., random port opening in FTP through a firewall) is an essential part of the present invention, which leads to a secured FTP architecture as recited in claim 1. Yet, there is no indication in any of the cited references that these problems were ever recognized or identified prior to the time of the present invention. Nor are these problems easily recognizable by a person of ordinary skill in view of the two-connection FTP model specified in the prevailing standard. Therefore, it is believed that the Examiner will never find any prior-disclosed motivation to combine single port communication with FTP.

In view of the foregoing, Appellant respectfully submits that the Examiner still has not met the burden of proof in establishing the obviousness of claims 1-25.

C. CONCLUSION

In view of the foregoing, it is respectfully submitted that the present application is in condition for allowance, and an early indication of the same is courteously solicited. The Examiner is respectfully requested to contact the undersigned by telephone at the below listed telephone number, in order to expedite resolution of any issues and to expedite passage of the present application to issue, if any comments, questions, or suggestions arise in connection with the present application.

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-0206, and please credit any excess fees to the same deposit account.

Respectfully submitted,

HUNTON & WILLIAMS, LLP

By: _____

Ce Li
Registration No. L0214

Hunton & Williams, LLP
1900 K Street, N.W., Suite 1200
Washington, D.C. 20006-1109
Telephone (202) 955-1500
Facsimile (202) 778-2201

Dated: June 20, 2007